

FIG. 2

TYPICAL FUNCTIONS FOR DATASET OBJECT oDs:

```
oDs.addRecord({colVal1...{colVal50}})  
oDs.addRecords(numRecords,{colVal1...{colVal50}})  
oDs.cancelRecordUpdate()  
oDs.close({bulkUpdateOption})  
oDs.column[columnID].name  
oDs.column[columnID].size  
oDs.column[columnID].value  
oDs.columnCount  
oDs.copy()  
oDs.create(container,oCrCols,{crReportTypes="crTemporary"})  
oDs.createFrom(container,source,{crReportTypes="crTemporary"})  
oDs.currentRecord  
oDs.deleteRecords({numRecords=1})  
oDs.findRecord(oFindRecordParams,recordNumber{columnNumber,columnPosition})  
oDs.firstRecord()  
oDs.insertRecord({colVal1...{colVal50}})  
oDs.insertRecord(snumRecords{colVal1...{colVal50}})  
oDs.lastRecord()  
oDs.name  
oDs.nextRecord()  
oDs.open(datasetId,access,{wait=true})  
oDs.overwrite  
oDs.prevRecord()  
oDs.RecordCount  
oDs.remove()  
oDs.save(container)  
oDs.searchRecord(oSearchRecordParams,recordNumber)  
oDs.sort(oSortParams)
```

FIG. 3

VALUE-ADD POWER FUNCTIONS FOR DATASET OBJECTS oDs

```
oDs.compareDatasets(.CompareParams,oCompareStatus)

//Dataset result is returned as controlled by the Dataset "overwrite" property
oDs.calculate(oCalculateParams{.numberOfRecords{.recordsProcessed}})
oDs.combineDatasets(oCombineParams{.recordsFound{.recordsCompared}})
oDs.find(oFindParams{.recordsFound})
oDs.interval(.IntervalParams{.intervalStatus})
oDs.search(oSearchParams{.recordsFound{.recordsSearched}})
oDs.tally(oTallyParams{.oTallyStatus})
```

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```
var oSearchParams = new SearchParams();
_____
oSearchParams.caseSensitive
oSearchParams.findNumeric.
oSearchParams.group
oSearchParams.invert
oSearchParams.maxFinds
oSearchParams.numberOfRecordsToSearch
oSearchParams.startRecordNumber

oSearchParams.columnItem[n].columnInfo("columnId{{startPos},endPos}}"}{{.dateFormat}}
oSearchParams.searchItem[n].addValueInfo(columnItem, value{{.valueRange}})
_____
//Calling format
oDs.search(oSearchParams{.recordsFound,recordsSearched})
```

FIG. 5

Partial JavaScript

```
// Search "CustCode", "StCd" and last 4 characters of the "Product Type"  
// columns  
.  
.  
.  
var srh = new SearchParams();  
srh.columnItem(1).columnInfo("CustCode");  
srh.columnItem(2).columnInfo("Product Type(6, 9)");  
srh.columnItem(3).columnInfo("StCd");  
srh.searchItem(1).addValueInfo(1, "amco");  
srh.searchItem(1).addValueInfo(2, "box0", "box1");  
srh.searchItem(1).addValueInfo(3, "ip");  
srh.searchItem(2).addValueInfo(3, "ip"); //can be out  
srh.searchItem(2).addValueInfo(2, "box2", "box3"); //of order  
srh.searchItem(2).addValueInfo(1, "intr");  
srh.searchItem(3).addValueInfo(1, "dico");  
srh.searchItem(3).addValueInfo(2, "box4", "box5");  
srh.searchItem(3).addValueInfo(3, "or");  
srh.searchItem(4).addValueInfo(1, "arco");  
srh.searchItem(4).addValueInfo(2, "box6", "box7");  
srh.searchItem(4).addValueInfo(3, "sh");  
srh.searchItem(5).addValueInfo(1, "amco");  
srh.searchItem(5).addValueInfo(2, "box8", "box9");  
srh.searchItem(5).addValueInfo(3, "or");  
var nFnd = nSrh = 0;  
ds2.search(srh, nFnd, nSrh);
```

FIG. 6

Equivalent MAPPER run-script:

```
@SRH. O.B.2 : 2-2.20-4.45-4 --"p:box0:amco"/r:"p:box1:amco"/__."p:b\
ox2:intr/r:r:ip:box3:intr/__.or:box4:dic0/r:or:box5:dic0/__.s\
h:box6:arco/r:sh:box7:arco/__.or:box8:amco/r:or:box9:amco/\
\
```

Results:

*St.	Status.	By.	Product	Serial.	Product	Order	Cust.	Product	Product	Ship	Ship	Spc
*CD.	Date.	In.	Type	Number.	Cost	Number	Code	Plan	Actual	Date	Order	Cod
P	83 224	LS	BLACKBOX1	436767		84389	AMCO	83 223	83 224			
P	83 225	LS	BLACKBOX1	436768		84390	AMCO	83 223	83 225			
P	83 219	LS	BLACKBOX2	637071		84353	INTR	83 218	83 219			
SH	83 203	LS	BLACKBOX6	785367		52833	ARCO	83 201	83 202	83 203	83 203	S8934
OR	83 217	LS	BLACKBOX9			98755	AMCO					
OR	83 210	LS	GREENBOX5			99753	DICO					

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Partial JavaScript and Sample Output for SearchParams object/Update Dataset object

```
...
var oSearchParams = new SearchParams();
oSearchParams . columnInfo[] . columnInfo("CustCode");
oSearchParams . searchItem[] . addValueInfo("amco");
oSearchParams . update = true;
var oDs = oDs . search(oSearchParams, recordsFound, recordsSearched);
while (oDs . currentRecord() != 0){
  if (oDs.column("OrderNumber"). value == "84389") {
    oDs.prevRecord();
  }else {
    oDs.column("CustCode"). value = "abcd";
    oDs . nextRecord();
  }
}

oDs.close(oDs, BulkMerge);
// Available results
... recordsFound
... recordsSearched
// bulk update merge
//15
//16
//17
```

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Results at line 5 -- before bulk update:

St Cd	Status In Date	By Type	Product Serial Number	Product Cost	Order Numbr	Cust Code	Product Plan	Product Actual	Ship Date	Ship Order	Spc Cod
P	83 224	LS	BLACKBOX1	436767	3500	84389	AMCO	83 223	83 224		
P	83 225	LS	BLACKBOX1	436768	3600	84390	AMCO	83 223	83 225		
P	83 222	LS	BLACKBOX5	737582		84040	AMCO	83 222	83 222		
P	83 227	LS	BLACKBOX7	733597		84351	AMCO	83 227	83 227		
OR	83 217	LS	BLACKBOX9			98755	AMCO				
SH	83 204	LS	BLACKBOX9	714577		64231	AMCO	83 201	83 203	83 204	S853
SH	83 206	LS	GREENBOX7	669624		54682	AMCO	83 201	83 205	83 204	S8553
SC	840 0	LS	GREENBOX8	97548		99943	AMCO	84 0			
OR	8303 0	LS	GREENBOX9			99951	AMCO				

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Results at line 5 -- before bulk update:

St Cd	Status Date	By In	Product Type	Serial Number	Produc Cost	Order Numbr	Cust Code	Produc Plan	Produc Actual	Ship Date	Ship Order	Spc Cod
IP	83I224	LS	BLACKBOX1	436767		84389	ANCO	83I223	83I224			
IP	83I225	LS	BLACKBOX1	436768		84390	abcd	83I223	83I225			
IP	83I2I9	LS	BLACKBOX2	637071		84353	INTR	83I2I8	83I2I9			
OR	840I10	LS	BLACKBOX4			94754	ARCO					
SC	840I10	LS	BLACKBOX5	67528I		9744I	FEDS	840I3I				
IP	83I222	LS	BLACKBOX5	737582		84040	abcd	83I222	83I222			
SH	83I203	LS	BLACKBOX0	746327		54237	FEDS	83I20I	83I202	83I203	S8738	
SH	83I202	LS	BLACKBOX6	36806I		54438	FEDS	83I20I	83I20I	83I202	S6937	
SH	83I209	LS	BLACKBOX6	777324		54232	DICO	83I207	83I208	83I209	S8538	
SH	83I203	LS	BLACKBOX6	785367		52833	ARCO	83I20I	83I202	83I203	S8934	
IP	83I2I6	LS	BLACKBOX6	92658I		8938I	INTR	83I2I5	83I2I6			
OR	83I2I0	LS	BLACKBOX7			99842	FEDS					
OR	83I227	LS	BLACKBOX7			99725	INTR					
SC	840I08	LS	BLACKBOX7	66548I		9754I	FEDS	840I22				
IP	83I227	LS	BLACKBOX7	733597		8435I	abcd	83I227	83I227			
SH	83I202	LS	BLACKBOX7	744627		44232	INTR	83I20I	83I20I	83I202	S853I	
IP	83I2I5	LS	BLACKBOX7	93358I		8438I	FEDS	83I2I5	83I2I5			
OR	83I230	LS	BLACKBOX8			92788	FEDS					
SH	83I203	LS	BLACKBOX8	945327		74272	FEDS	83I20I	83I202	83I203	S85I8	
OR	83I2I7	LS	BLACKBOX9			98755	abcd					
OR	83I2I0	LS	BLACKBOX9			98782	USSC					
IP	83I2I7	LS	BLACKBOX9	538993		8478I	USSC	83I2I5	83I2I7			

FIG. 10

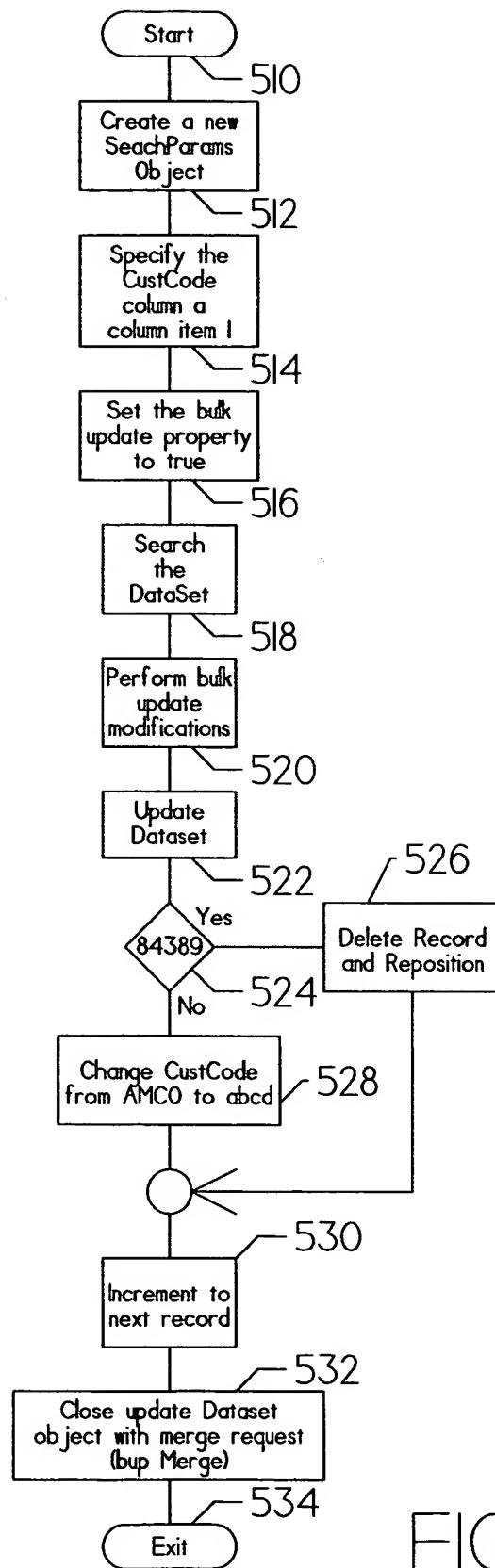


FIG. II

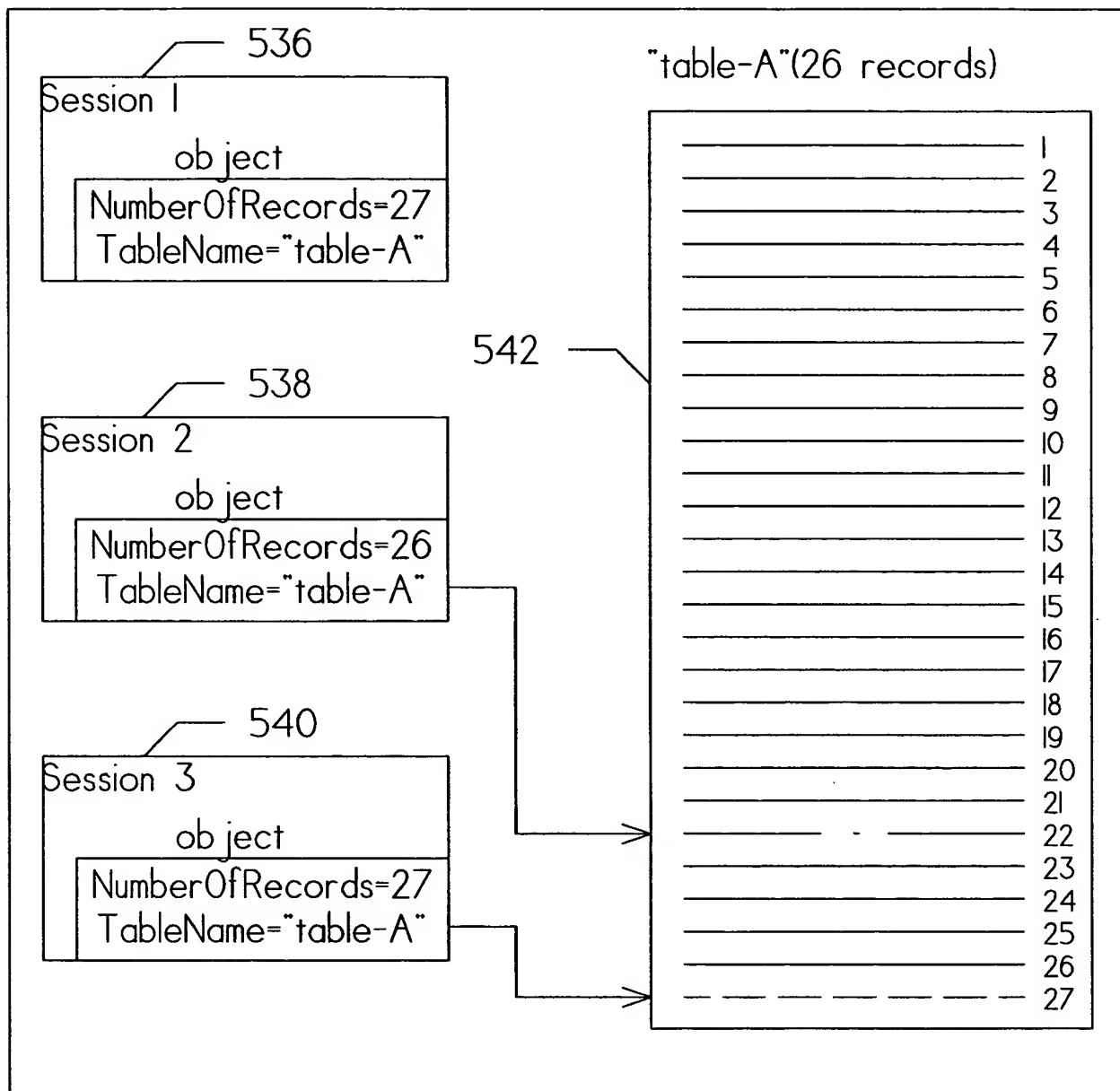


FIG. 12

Entity Event	Effect on Version property
Initial reference	Property value set to zero
Property query (non-deferred)	Current primary property value returned
Property query (deferred)	Current deferred property value returned
Begin deferred sequence	Copy primary property value to deferred property value
Update (immediate)	Increment primary property value by one
Update (deferred)	Increment deferred property value by one (primary unchanged)
Commit (deferred)	Copy deferred property value to primary property value

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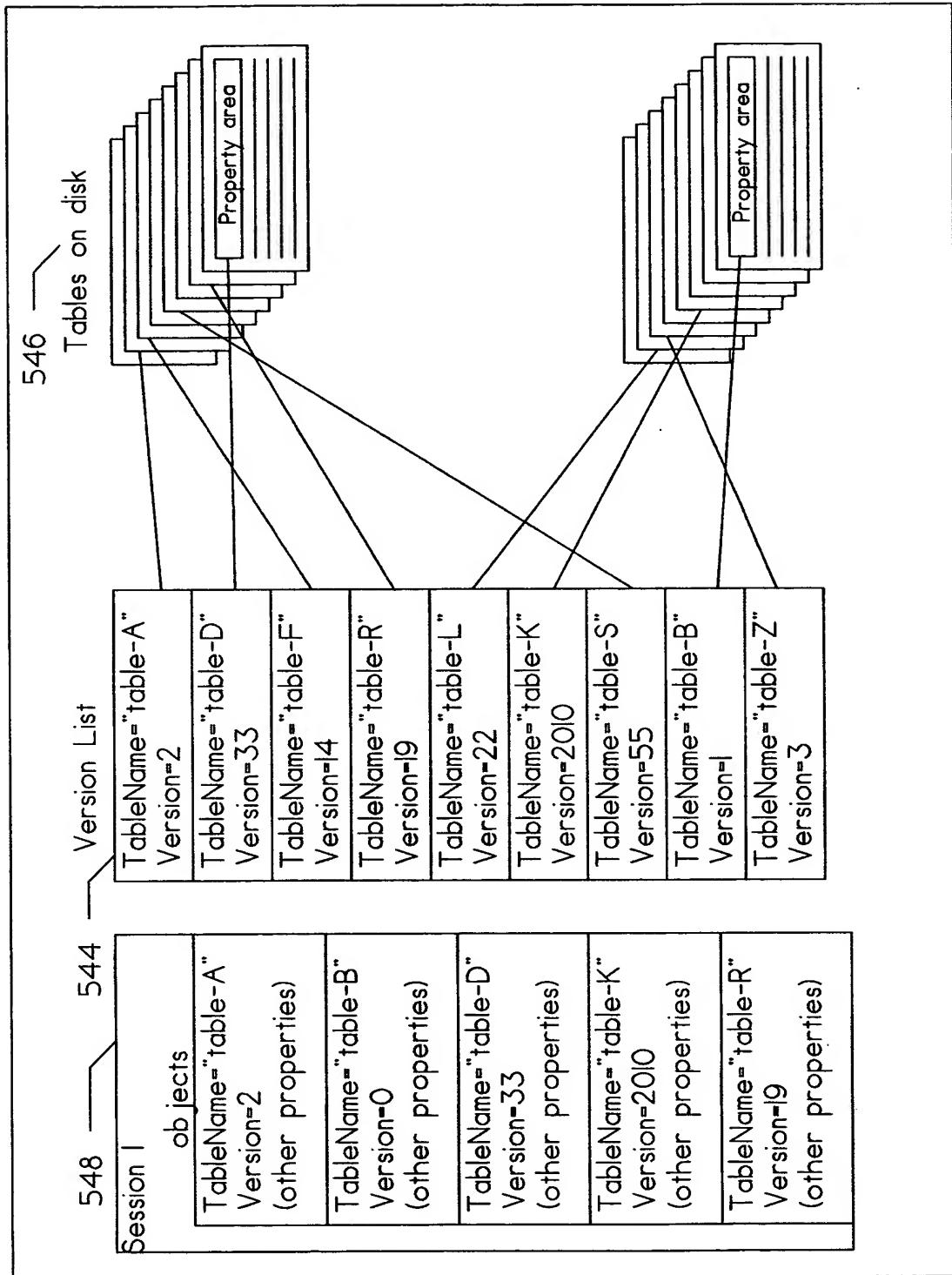


FIG. 4